

WHAT IS CLAIMED IS:

1. A reconfigurable surface, comprising:
a flexible surface; and
a matrix of rods for contouring said flexible surface to a desired shape.
2. The reconfigurable surface as described in claim 1, wherein said flexible surface is supported by the tips of said rods.
3. The reconfigurable surface as described in claim 1, wherein each rod of said rods is movable in a vertical direction against said flexible surface and is locked in position when elevated to a predetermined position.
4. The reconfigurable surface as described in claim 3, wherein the predetermined position is controlled by a computer.
5. The reconfigurable surface as described in claim 3, wherein each rod of said rods is fitted with two pneumatically controlled locks, which release a particular rod to move freely by coincident addressing.
6. The reconfigurable surface as described in claim 5, said pneumatically controlled locks comprise a first lock for X-coordinate and a second lock for Y-coordinate.
7. The reconfigurable surface as described in claim 2, wherein said flexible surface is sucked against said tips.
8. The reconfigurable surface as described in claim 7, further comprising a chamber for housing said rods and evacuated for creating a suction to suck said flexible surface against said tips of said rods.
9. The reconfigurable surface as described in claim 5, further comprising an elevator, on which rest the bottom ends of said rods which are unlocked.
10. The reconfigurable surface as described in claim 9, wherein said elevator is reset at the topmost position with all the locks released.
11. The reconfigurable surface as described in claim 10, wherein the rods, which are coincidentally addressed, are locked as the elevator descends.
12. The reconfigurable surface as described in claim 3, further comprising inflatable tubes to serve as brakes to lock the rods in position when inflated.
13. The reconfigurable surface as described in claim 12, wherein said tubes are aligned in two dimensions for coincident addressing.

14. The reconfigurable surface as described in claim 13, where said tubes are aligned in two orthogonal directions.

15. The reconfigurable surface as described in claim 13, further comprising a frame having via holes for guiding said rods, and having horizontal grooves for holding said tubes.

16. The reconfigurable surface as described in claim 1, further comprising a second configurable surface to clamp against said configurable surface to serve as a mold for casting molten material.

17. The reconfigurable surface as described in claim 1, wherein said reconfigurable surface serves as a contour map.

18. The reconfigurable surface as described in claim 7, wherein said flexible surface is sucked against said tips by gravity.

19. The reconfigurable surface as described in claim 1, wherein said flexible surface is air.

20. The reconfigurable surface as described in claim 1, wherein reconfigurable surface serves a screen in an image projection system.

21. The reconfigurable surface as described in claim 20, further comprising geographical features optically projected from a projector onto said flexible surface, and computer means to correct the offset of horizontal positioning of said features due to the topology of said flexible surface.